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ABSTRACT

To determine which summer-session length was most effective, a comparative analysis was made of student enrollments, student grade point averages (GPA), student satisfaction, and faculty opinions on the three campuses (Easter, Western, and Metropolitan) of Cuyahoga Community College. The terms compared were five, five and one-half, and eight weeks. Questionnaires were mailed to 1,230, or 20%, of the summer student body; 524 students responded. To ascertain faculty opinions, questionnaires were distributed to all 133 faculty members who taught during the 1971 (8 and 5 weeks) and 1972 (8 and 5-weeks) summer sessions; a total of 95, or 71%, answers were processed. Results of the study showed that the shorter term was more popular with the Western Campus students and that term length influenced the mean number of credit hours carried per student at that campus. The capability of completing a program of studies earlier than normal was most frequently cited as the reason for enrolling in a summer session; enrollment was not related to the length of the session. Most students were satisfied with the length of the term in which they were enrolled. Nearly all faculty respondents considered term length to be of some importance in attracting summer students. Summer GPA for 1972 was significantly higher than the GPA's of the 1971-72 academic year. There were significant differences between eight-week and five-and-one-half-week GPA's, the eight-week mean being 3.01 and the five and one-half mean being 2.61. These differences appeared to be related to campus influences. Twhenty-six tables and eight appendixes prpvide the data. (DB)

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ANALYSIS OF THE

1972 SUMMER SESSION

Office of Institutional Research and Planning
Office of Executive Vice President

Cuyahoga Community College
2214 East 14th Street
Cleveland, Ohio 44115

May 1973

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THE PROBLEM

To date, the summer session at Cuyahoga Community College has been shorter than a regular academic year term. However, the matter of how much shorter has been a perennial question resulting in several different answers over a period of years. As we review past *solutions* such as the single eight-week summer module of 1969, the single six-week term of 1970, and the Western Campus's five (five and one-half) and eight-week summer modules of 1971 and 1972, we ask which term length was best with respect to accomplishing the college's purpose in offering a summer session.

The college's main purpose in offering a summer session is to provide a service to students. Defining *service* operationally is a difficult matter and for us, at least, has been much like trying to trap a cloud with a fish net. We could say that service is what the college provides when it has students enrolled in course work. The measurement of service would be in terms of the amount of course work each student has taken. With credit courses (the part of the college service which we consider most important when debating length of term) we calculate student credit hours and then full-time equivalent students. We could say that, in general, service to students is the opportunity for education and the use of educational facilities and that by offering a summer session, the college establishes on a year-around basis the service it normally extends during the regular academic year. While this definition lacks the specificity requisite to measurement, it provides the rationale for examining how well we are serving our students without actually specifying what we mean by serving.

We propose to examine in what ways, if any, summer term length is related to the college's serving of students in much the same way that barometers measure the intensity of that which cannot be seen. Summer student enrollment may be affected by the term length variable and could indicate the relative success of a particular term length over another in attracting student enrollment. Student grade means, as a measure of performance, may also vary by summer term length. Subjective data like student satisfaction with or preference for a particular term length and faculty opinion about the best length of term for maximizing the student's learning experience can also indicate, we feel, the extent to which Cuyahoga Community College summer sessions have served students.

PROCEDURE

Data Collection and Analysis

As already mentioned we identified four variables as measures of how well the college is serving summer students and will try to explore whether these variables are related to term length: student enrollments, student grade-point averages, student satisfaction, and faculty opinions about the best length for a summer term.

After collecting summer school enrollment and grade data from standard college sources, we sent questionnaires to a sample of students and faculty who participated in the 1972 summer session at Cuyahoga Community College (see Appendix V for copies of the questionnaires). Students were asked to report their most important reason for attending the summer session, to indicate the relative importance of a term length as a consideration in their decision to enroll, to indicate whether they knew anyone who did not enroll because of the length of the summer term, and to report what they considered to be the best and worst lengths for a summer term. In addition we asked them whether they would have registered for more, the same, or fewer hours if the term length had been different from what was offered. Additional data about the responding students were obtained from the Student Master File compiled by the offices of Admissions and Records and maintained under their direction by the Computer Center.

Faculty were asked to opine the best length for a summer term with respect to maximizing the students' learning experience in a particular subject area. They were also requested to rate the relative importance of term length in attracting student enrollments and to compare, on the basis of their full-time teaching experience, summer students to regular term students.

Data were generally counted as responses in categories and, where appropriate, subjected to Chi-square analyses to test null hypotheses about relationships. In some cases however, data were assumed to approximate equal interval scales and so were analyzed with student's t. As always, some of the assumptions to be met in order for a particular statistical inference to be valid may be questionable. We have tried to recognize such dangers, so would welcome expressions pointing out our oversights.

The Sample: Students

Questionnaires were mailed to 1230, or 20 percent, of the summer student body. The *invited* sample, selected on a random basis, was representative of the total summer student population on the basis of campus, sex, enrollment status, transfer status, and hours carried. A follow-up mailing was conducted for students not responding to the first questionnaire. A total of 524 students responded to the survey, 43 percent of the invited sample of 9 percent of the entire summer student body.

We compared respondents to nonrespondents on five variables in order to know whether we could generalize our results to all summer school students. We discovered that there were significant campus differences in the rate of return, proportionately more Western students and fewer Metropolitan Campus students responding (see Table 1). However, comparison of respondents to nonrespondents by campus on the basis of enrollment status, sex, transfer status and hours carried indicated that each campus sample (with the exception of Eastern) was representative of campus population on all four variables. The Eastern Campus sample was unrepresentative on one variable -- transfer status. (Tabled data for the samples are included in Appendices I, II and III.)

TABLE 1

DISTRIBUTION OF RESPONDENTS AND NONRESPONDENTS BY CAMPUS

Campus	Respondents		Nonrespondents		Sample Total		All 1972 Summer Students	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Eastern	41	8%	45	6%	86	7%	428	7%
Metropolitan	307	59%	493	70%	800	65%	3,967	65%
Western	176	34%	168	24%	344	28%	1,745	28%
Total	524		706		1,230		6,140	

We will report the summer student questionnaire results by campus. We believe that these results can be generalized to the three campus student populations with caution exercised for Eastern in instances where transfer status might influence how a student would respond. Last year's sample was not representative of the student population in terms of age. It could well be that this year's sample is also not representative in terms of age, the sample being older than the population. However, we didn't collect data this year on the ages of students in the sample, so an additional caution will be exercised in generalizing results where we think age might influence the way in which students respond.

The Sample: Faculty

Faculty opinions about summer term length were requested on a questionnaire distributed to 133 full-time faculty members who taught during both the 1971 and 1972 summer sessions. A total of 95 usable returns, or 71 percent, were processed.

Table 2 shows the distribution of faculty respondents and nonrespondents by campus. To test for a campus difference in the rate of response we had to delete the Eastern frequencies which were too small to be included for meaningful analysis of the data using Chi-square. The observed differences between the Metropolitan and Western campuses are not significant. However, we will report the results of the faculty questionnaire by campus, inasmuch as term length is related to campus and faculty opinions could be influenced by term length experienced.

TABLE 2

DISTRIBUTION OF FACULTY RESPONDENTS
AND NONRESPONDENTS BY CAMPUS

Campus	Faculty Respondents		Faculty Nonrespondents		Total	
	Number	Percent	Number	Percent	Number	Percent
Eastern	4	4%	3	8%	7	5%
Metropolitan	61	64%	22	56%	83	62%
Western	30	32%	14	36%	44	33%
Total	95		39		134	

ENROLLMENT INFORMATION

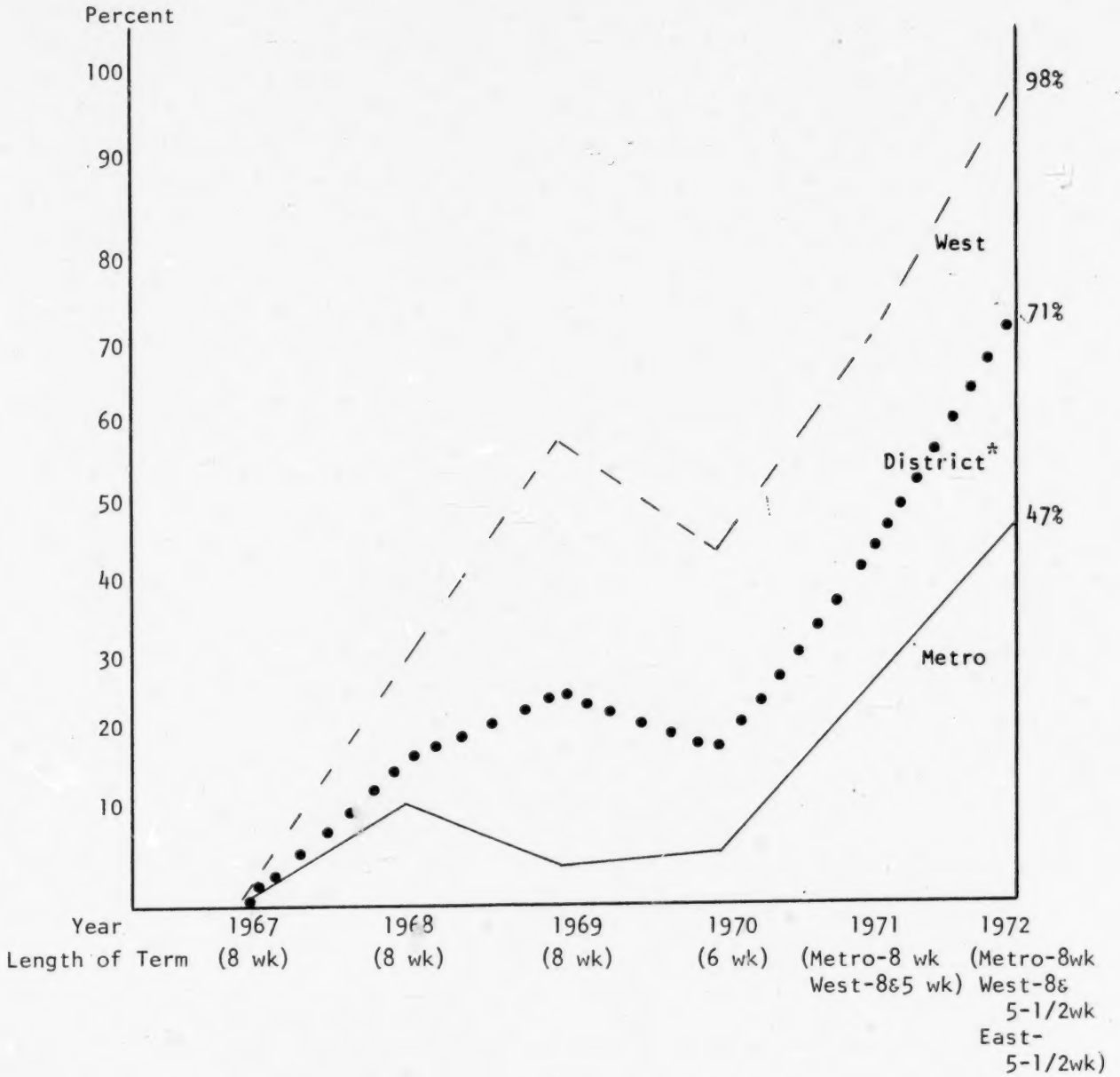
Summer Enrollment Changes at Cuyahoga Community College, 1967-1972

Summer enrollment headcount for the years 1967 through 1972 is depicted in Table 3 and Figure 1. The addition of 1972 data to the table and graph which appeared in the *Analysis of the 1971 Summer Calendar* indicates a continuation of the trend we reported last year: the college is experiencing overall summer enrollment growth.

TABLE 3

SUMMER ENROLLMENT HEADCOUNT,
1967 THROUGH 1972

Summer Session		Metro		Western		Eastern		District Total		Dates	
Year	Length	N	Incr.	N	Incr.	N	Incr.	N	Incr.	Start	End
1967	8 wks	2701		883		--	--	3584		6-19	8-11
1968	8 wks	3064	+13%	1157	+31%	--	--	4221	+18%	6-17	8- 9
1969	8 wks	2964	- 3%	1404	+21%	--	--	4368	+ 3%	6-23	8-15
1970	6 wks	3034	+ 2%	1284	- 9%	--	--	4318	- 1%	6-22	7-31
1971	8 and 5 wks	3670 (8 wk)	+21%	1531 (8&5 wk)	+19%	--	--	5201	+20%	6-28	7-30 &8-20
1972	8 and 5-1/2 wks	3967 (8 wk)	+ 8%	1745 (8&5½ wk)	+15%	428 (5½wk)	--	6140	+18%	6-26	8- 1 &8-18



Note:
District data for 1972 include Eastern Campus.

Figure 1. Percent Change in Summer Enrollment 1968 Through 1972
Based upon 1967 Summer Headcount

In what way, if any, term length is related to the pattern of headcount enrollment growth is difficult to ascertain. There are no doubt many influences on summer enrollment and the difference in changes for 1969 and 1970 between the Metropolitan and Western Campuses suggests that some of these influences may be characteristic of a particular campus. However, we cannot compare the eight- and five- (five and one-half) week Western enrollments for 1971 and 1972 since headcount enrollment was not reported by term length in registration tally reports.

Summer FTE Enrollment Changes at Cuyahoga Community College, 1971 and 1972

Summer student credit hours have been reported by term length so we were able to produce a comparison of the longer and shorter modules at Western for 1971 and 1972. Table 4 shows the FTE enrollment change over 1971 by campus and term length. The data indicate a notable increase in FTE enrollment for the shorter term at Western and a decrease for the Western eight-week module. This suggests that the shorter term is more popular than the longer term with Western Campus summer students. More 5-1/2-week courses than 8-week courses were scheduled in 1972. In 1972, 5-1/2-week courses were offered at Western in the evening where none were offered in the evening during 1971.* It looks as if the students were well served with the two course lengths at Western.

TABLE 4

SUMMER FTE ENROLLMENT BY CAMPUS AND TERM LENGTH, 1971 AND 1972

Campus and Term	Summer FTE Enrollment					
	1971		1972		Percent Change in Total FTE	Percent Change in No. of Sec.
	Total FTE	Per Section	Total FTE	Per Section		
Metropolitan (8 wks)	1403	5.03	1614	5.62	+15.0%	+ 2.9%
Western (8 wks)	258	4.61	232	5.40	-10.1%	-23.2%
Western (5 and 5-1/2 wks)	221	5.97	306	6.00	+38.5%	+38.5%
West Total	479	5.15	536	5.72	+11.9%	+ 1.1%

*See Appendix IV for table of scheduled and cancelled sections by campus and term length, 1970 through 1972.

While the average student FTE per section increased from 1971 to 1972, the number of sections which were cancelled decreased from 1971 to 1972. This was due to the campuses not scheduling as many courses in the initial offering even though an enrollment increase was projected. The decrease was five percent at Metro and seven percent at Western. Of course the total number of active sections also increased, three percent at Metro and one percent at Western.

Mean Credit Hours Carried by Summer Students, 1969 through 1972

By examining average credit hours carried by summer students for 1969 through 1972, we have attempted in yet another way to explore the effect of term length on student enrollment. Table 5 shows the mean credit hours carried by summer students and the differences between years and between campuses for a four-year period.

TABLE 5

MEAN CREDIT HOURS CARRIED BY SUMMER STUDENTS,
1969 THROUGH 1972

	Mean Credit Hours Carried by Summer Students							
Campus	1969 (8 wks)	1970 (6 wks)	Diff. Between 1969 & 1970	1971 (M-8 wks) (W-8 & 5 wks)	Diff. Between 1970 & 1971	1972 (M-8 wks) (W-8 & 5-1/2 wks)	Diff. Between 1971 & 1972	Diff. Between 1969 & 1972
Metro	5.45	4.86	-.59*	5.72	.86*	6.07	.35*	.62*
West	4.94	4.55	-.39*	4.75	.20*	4.72	-.03	-.22*
(Diff. between campus means)	(.51*)	(.31*)		(.97*)		(1.35*)		

*Difference is significant at the .05 level.

In each year the difference between campuses has been significant. For some reason Metropolitan Campus summer students enroll, on the average, for more credit hours. The smallest difference between the campuses occurred in 1970 when both campuses experienced a significant decrease over the previous year's average. That decrease appears to have been related to the six-week session offered by both campuses in 1970.

The increase in campus differences from 1970 to 1971 and again from 1971 to 1972 corresponds to the campus differences in term length. That is, in 1970 both campuses offered courses in the same term length. In 1971 Western offered 40 percent of its courses in a shorter time period than Metro. In 1972, Western offered 54 percent of its courses in a shorter time period.

After 1970 the Metropolitan Campus average increased significantly, in 1971 and again in 1972. On the other hand the Western Campus average increased significantly in 1971 but dropped, though not significantly, in 1972.

In a four-year period, then, the Metropolitan Campus, which offered three summer sessions of eight weeks in length and one session of six weeks, has experienced a significant overall increase in average hours carried by students. The Western Campus, offering a variety of term lengths during the same period, has experienced a significant overall decrease in average hours.

We have no explanation of the increase in mean credit hours per student. The decrease corresponds to the shortening of the summer term in both logical and empirical analysis.

Cuyahoga Community College Summer Enrollment Growth Compared to Cleveland State University, Lakeland, Lorain and Sinclair Community Colleges

So far we have discussed the historical pattern of Cuyahoga Community College's summer enrollment growth. At this point we will compare our growth to that of other Ohio institutions whose summer term lengths have differed from ours.

Looking at enrollments in the other three Ohio community colleges (see Table 6), we found an annual growth rate in headcount from 1970 to 1971 of 33 percent. In 1972 (from 1971) the rate slowed to 10 percent. Cuyahoga Community College reported a 20 percent and 18 percent growth for the two corresponding years. In each institution the rate of increase was smaller for the 1971-72 comparison. When the three summers are compared to get an overall growth rate compounded, the three colleges have a 21 percent rate compared to Cuyahoga Community College's rate of 19 percent.

We might also note that Cuyahoga Community College's summer enrollment accounts for about half of the summer enrollment in Ohio community colleges.

TABLE 6

HEADCOUNT AND FTE ENROLLMENT AT CUYAHOGA COMMUNITY COLLEGE AND FOUR OTHER INSTITUTIONS
SUMMER 1969 THROUGH 1972

Institution and Summer Session	HEADCOUNT										FTE					
	TOTAL		DAY		EVE.		PART-TIME		FULL-TIME		TOTAL		DAY		EVE.	
	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change	No.	% of Change
Cuyahoga Community																
1969	4,368	--	2,071	--	2,297	--	4,266	--	102	--	1,537	--	896	--	641	--
1970	4,318	- 1%	2,327	+12%	1,191	-13%	4,273	--	45	- 56%	1,374	-11%	883	- 1%	491	- 23%
1971	5,201	+20%	2,917	+25%	2,284	+15%	5,029	+18%	172	+282%	1,881	+37%	1,235	+40%	646	+ 32%
1972	6,140	+18%	3,504	+20%	2,636	+16%	5,864	+17%	276	+60%	2,280	+21%	1,535	+24%	745	+ 15%
Sinclair Community College																
1969	971	--	560	--	411	--	#	--	#	--	383	--	261	--	122	--
1970	1,838	+89%	1,041	+86%	797	+94%	1,196	--	642	--	654	+71%	400	+53%	254	+108%
1971	2,521	+37%	1,463	+41%	1,058	+33%	1,340	+12%	1,181	+84%	852	+30%	550	+38%	302	+ 19%
1972	2,806	+11%	1,679	+15%	1,127	+ 7%	1,562	+17%	1,244	+ 5%	957	+12%	649	+18%	308	+ 2%
Cleveland State University*																
1969	4,287	--	2,454	--	1,833	--	#	--	#	--	2,730	--	#	--	#	--
1970	4,716	+10%	2,696	+10%	2,020	+10%	#	--	#	--	2,295	-16%	#	--	#	--
1971	5,609	+19%	3,207	+19%	2,402	+19%	#	--	#	--	2,710	+27%	#	--	#	--
1972	4,490	-20%	3,159	- 1%	1,331	-45%	#	--	#	--	2,674	- 1%	1,953	--	721	--
Lorain Community College																
1969	1,387	--	#	--	#	--	--	--	#	--	#	--	#	--	#	--
1970	1,458	+ 5%	#	--	#	--	--	--	#	--	#	--	#	--	#	--
1971	1,735	+19%	942	--	793	--	1,275	--	460	--	543	--	339	--	204	--
1972	1,762	+ 2%	952	+ 1%	810	+ 2%	1,332	+ 4%	430	- 7%	539	- 1%	322	- 5%	217	+ 6%
Lakeland Community College																
1969	565	--	#	--	#	#	#	--	#	--	225	--	#	--	#	--
1970	735	+30%	#	--	#	#	#	--	#	--	222	- 1%	#	--	#	--
1971	1,093	+49%	#	--	#	#.	#	--	#	--	315	+42%	#	--	#	--
1972	1,315	+20%	#	--	#	#	#	--	#	--	405	+29%	#	--	#	--

*Data for Cleveland State University exclude graduate enrollment
#Data were not available in all categories.

FTE=Credit Hours ÷ 15

STUDENT QUESTIONNAIRE RESULTS

We asked students to mark a list of reasons to identify their most important reason for attending the 1972 summer session at Cuyahoga Community College. Table 7 shows the distribution of responses by campus. Western Campus respondents are reported by term length experienced in order to test for differences in reported reasons by term length.

For the most part the distributions are the same with the exception of significant differences between the Metropolitan and Western Campuses for responses identified as *special program* and *particular course or courses appealed to me*. Proportionately more Metropolitan than Western Campus respondents reported being in special programs, while more Western respondents cited course appeal as their most important reason for attending the summer session.

We were interested in the reasons that students attend a summer session and what reasons would apply to more than one summer session. In Table 8 the distributions of reasons reported by 1971 and 1972 respondents are presented for comparison. However, we must recall that the 1971 sample was not representative of the 1971 summer student population on the dimensions of age and new-continuing-returning status, and transfer status. For comparison purposes, though, the important characteristic of the two samples is that they came from different summer sessions. The difference in year cannot override the lack of representativeness but we feel we at least have a sort of pilot comparison.

Acceleration was the reason most often cited by both 1971 and 1972 respondents. It seems that the wish to shorten the period of time to reach a program or degree goal frequently motivates summer school enrollment at Cuyahoga Community College.

On the 1971 questionnaire we considered the third and fourth items together to constitute acceleration. On the 1972 questionnaire we had only one item to assess acceleration. Furthermore, the scope of the two 1971 items was narrowed in the 1972 questionnaire by limiting the question to acceleration at Cuyahoga Community College. However, finishing a program sooner at another college would involve transferring credits to that institution. Thus we reasoned that at least some of the proportion of students who cited transfer of credits as a reason for attending the Cuyahoga Community College summer session could be reported as attending for reasons of acceleration. The net result is that the proportion of students who attend for purposes of acceleration is high in both samples.

The difference in percentages of 1971 and 1972 respondents citing *Other* reasons is worth noting. We believe that the lower 1972 percentage for *Other* resulted from the inclusion on the 1972 questionnaire of three items specified by last year's respondents as other reasons: to lighten course load, needed course(s) not offered at a convenient time during the regular year, and actually wanted to work but couldn't find a job.

TABLE 7

DISTRIBUTION OF REPORTED REASONS FOR ATTENDING THE SUMMER SESSION

Most Important Reason for Enrolling	Respondents											
	East (5½ wk)		Metro (8 wk)		West (5½ wk)		West (8 wk)		West (Both)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
To earn credit(s) for transfer to another institution	10	24%	61	20%	19	21%	15	22%	8	47%	113	22%
To pick up credits so that I can finish my program or earn my degree at CCC sooner.	13	32%	98	32%	33	37%	23	33%	4	24%	171	33%
To repeat a course or courses.	1	2%	15	5%	1	1%	--	--	--	--	17	3%
I am in a special program.	--	--	28	9%	3	3%	2	3%	--	--	33	6%
A particular course or courses appealed to me.	5	12%	25	8%	13	14%	6	9%	--	--	49	9%
To lighten my course load for the 1972 Fall term.	1	2%	31	10%	11	12%	7	10%	3	18%	53	10%
Needed a course or courses that were not offered at a time convenient for me during the regular academic year.	--	--	9	3%	--	--	1	1%	--	--	10	2%
I actually wanted to work instead of attending summer school but I couldn't find a job.	--	--	3	1%	1	1%	2	3%	--	--	6	1%
Other	8	20%	22	7%	8	9%	9	13%	1	6%	48	9%
No Response	3	7%	15	5%	1	1%	4	6%	1	6%	24	5%
Total	41		307		90		69		17		524	

TABLE 8

REPORTED REASON FOR ATTENDING THE SUMMER SESSION,
1971 AND 1972 STUDENT RESPONDENTS

Reason for Attending the Summer Session	1971 Respondents	1972 Respondents
To repeat a course or courses.	2%	3%
To make up credit(s).	9%	#
To get degree sooner.	27%	#
To finish program sooner.	25%	#
To finish program or earn degree at Cuyahoga Community College sooner.	#	34%
Course(s) appealed to me.	11%	10%
I am in a special program.	5%	7%
To earn credits for transfer to another institution.	#	23%
To lighten my course load for the 1972 Fall term.	#	11%
Needed course(s) not offered at a time convenient for me during the regular academic year.	#	2%
I actually wanted to work instead of attending summer school but I couldn't find a job.	#	1%
Other	20%	10%
Total Number of Respondents.*	206	524
Total Number of Enrollees	5,201	6,140

#This question not asked.
*No data groups were prorated.

The Reported Importance of Term Length as a Consideration in the Student's Decision to Enroll

We asked students to indicate how important term length was as a consideration in their decision to enroll in the summer session. Table 9 shows the distributions of respondents by campus and term length experienced. Analysis of the mean importance to students in the five-and-one-half and eight-week terms indicated a significant difference in response by term length experienced; that is, term length was more important as a consideration in the decision to enroll for respondents who attended the five-and-one-half-week session than for respondents who enrolled in the eight-week term.

We hypothesize that the Metropolitan Campus probably enrolled some students who would have opted for the five-and-one-half-week term if they had a choice. If our hypothesis is correct the mean importance of term length for the Metro students should fall between the West eight-week and the five-and-one-half-week means, and it does. Of course the same reasoning should also apply to the Eastern Campus. Some Eastern enrolled students would probably have selected an eight-week term which corresponds to a rating of less importance thereby lowering the Eastern Campus mean in comparison to the Western five-and-one-half-week mean. Our conclusion was that some students considered term length as an important influence upon their decision to enroll, and these students tended to enroll in the five-and-one-half-week term. Not having a five-and-one-half-week term option may discourage these students from enrolling at Cuyahoga Community College.

TABLE 9

REPORTED IMPORTANCE OF TERM LENGTH AS A CONSIDERATION IN THE DECISION TO ENROLL

How Important Was Term Length as a Consideration in Your Decision to Enroll?	Respondents											
	East (5½wk)		Metro (8 wk)		West (5½wk)		West (8 wk)		West (Both)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A very important consideration	17	41%	68	23%	39	43%	9	13%	5	29%	138	27%
A consideration of some importance	10	24%	107	36%	32	36%	24	35%	3	18%	176	34%
Not a consideration at all	14	34%	126	42%	19	21%	36	52%	9	53%	204	39%
Total*	41		301		90		69		17		518	
Mean	1.07		.80		1.22		.59		.76		.87	

*Does not include students who did not respond to this item.

Whether Student Respondents Knew Anyone Who Didn't Enroll in the Summer Session Because of the Length of Term

Each year when the coming summer session was being discussed a question was raised, do we lose students if we offer all courses in one module? In other words, does a campus which offers only one term length decrease its service to students?

To get at this question we should have surveyed students who didn't enroll in the summer session because the module offered was not suited to their needs. Since we didn't know who those students were, we asked enrolled students if they knew one of the nonenrolled students. We thought this procedure would provide three points of information pertaining to the question. The data are reported in Table 10.

TABLE 10

WHETHER RESPONDENTS KNEW ANYONE WHO DID NOT ENROLL IN THE SUMMER SESSION BECAUSE OF TERM LENGTH

Do You Know Anyone Who Didn't Enroll for the CCC Summer Session Because of the Length of Term?	Respondents							
	East		Metro		West		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	2	5%	38	13%	16	9%	56	11%
No	39	95%	263	87%	159	91%	461	89%
Total*	41		301		175		517	

*Does not include students who did not respond to this item.

The first information we received was the percentage of students who reported that they knew someone who didn't enroll for the summer session at Cuyahoga Community College because of the length of term. We found 11 percent (plus or minus 2 or 3 percent) reported that they did know someone in this circumstance.

The second information was the relationship of knowledge of such students to the campus and term length offered on that campus. We found no relationship. (The probability was about .20.) However, our predicament in this respect is that our design could not control for possible campus differences. Thus the Eastern campus students may have been different in some key respect from the Metropolitan campus students. The difference,

to be pertinent here, would have had to counteract the effect of the different term lengths. We also could not clearly interpret the responses as indicating that Eastern students didn't enroll because there wasn't a longer term or the reverse interpretation at Metro. After weighing the possibilities, we tentatively concluded that there is no relationship between reporting knowledge of a student who did not enroll because of term length and the length of the term at the campus that student would presumably have attended.

The third information concerned the relationship between the number of modules offered (one at East and Metro compared to two at West) and the knowledge of nonenrolled students. Again we found no relationship (probability of about .404). The finding is again confounded by possible campus differences. As we weighed the possibilities we favored the conclusion of no relationship.

Our conclusions are perplexing though. We are inclined to believe that students reporting that they know other people who did not enroll as students because of term length are telling the truth. But if this relationship exists, why haven't we been able to relate it to the matter of term length, either the module of time offered or the variety of modules offered? Our answer is either that such relationships don't exist or that our assessment of them is faulty. At this point we choose a decision of no progress toward a decision.

Credit Hours Respondents Reportedly Would Have Taken If the Term Length Had Been Different

We asked students to report how many credit hours, relative to the number actually carried, they would have taken if the term length offered had been different. Table 11 summarizes the responses to the particular question asked of each campus sample. All groups of respondents reacted to the proposed difference in term length in much the same way, most of each group indicating that they would take the same number of hours.

That most respondents would take the same number of hours whether the term length was longer or shorter than the one they experienced suggests that, to some extent, term length does not affect the student's decision about how many hours to carry. We recognize that there are other influences on the decision about how many hours to take, but we also suspect that students may not understand that the *same* number of credit hours on a *shorter* or *longer* term basis means more or less time spent in class per day.

On the other hand, we cited evidence that students actually enroll for fewer hours when the term is shorter. We are inclined to believe that the number of hours carried is a more subtle influence than term length upon the enrollment decisions that students make.

TABLE 11

CREDIT HOURS RESPONDENTS REPORTEDLY WOULD HAVE TAKEN
IF THE TERM LENGTH HAD BEEN DIFFERENT

Questions Asked of Summer Students by Campus: If the Summer Term Length Had Been	Credit Hours Respondents Would Have Taken Relative to the Number Actually Taken		
	More	Same	Less
Longer than 5-1/2 wks. (Eastern only)	5	28	5
Shorter than 8 wks. (Metropolitan only)	36	223	39
Longer than 8 wks. (Metropolitan)	34	230	28
(Western)	3	57	7

Best and Worst Lengths for a Summer Term Reported by Respondents

We asked students to report, in their opinion, the best and worst lengths for a summer term. The question did not specify the nature of the *best* or *worst* comparison but we assumed that students would interpret best and worst term length relative to accomplishing their purpose for attending the summer session.

Tables 12 and 13 show the distributions of respondents by campus and term length experienced. In Table 12, about two-thirds of each group cited the term length experienced as the best length for a summer term. Table 13 indicates that very few respondents in each campus by term-length group considered eight weeks to be the worst length for a summer term. As we would expect, the differences between respondents citing five and one-half and eight weeks as worst are related to term length experienced.

Tables 14 and 15 give the data summarized to indicate the respondents' satisfaction or dissatisfaction with the term length they experienced. On Table 14 each group of respondents indicated the term length they experienced as best. The responses did not differ between campuses or term lengths.

On the other hand, the differences among the data on Table 15 are significant at the .001 level. A greater proportion of respondents who experienced the five-and-one-half week term reported it the worst length for a summer term. We speculated that the five-and-one-half week term may exert more pressure upon students because of time, which more students find unpleasant, than the term-related pressures of the eight-week session. However, there is no indication that the number of students who object to the condition is so great as to suggest that the five and one-half week option be discontinued.

TABLE 12

BEST LENGTH FOR A SUMMER TERM REPORTED BY RESPONDENTS

Best Length for a Summer Term	Respondents											
	East (5½ wk)		Metro (8 wk)		West (5½ wk)		West (8 wk)		West (Both)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
5-1/2 weeks including finals	28	70%	64	21%	58	66%	13	19%	12	71%	175	34%
8 weeks including finals	9	22%	194	64%	22	25%	44	66%	5	29%	274	53%
11 weeks including finals	3	8%	46	15%	8	9%	10	15%	--	--	67	13%
Total*	40		304		88		67		17		516	

*Does not include students who did not respond to this item.

TABLE 13

WORST LENGTH FOR A SUMMER TERM REPORTED BY RESPONDENTS

Worst Length for a Summer Term	Respondents											
	East (5½ wk)		Metro (8 wk)		West (5½ wk)		West (8 wk)		West (Both)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
5-1/2 weeks including finals	3	10%	145	49%	16	18%	25	37%	2	12%	191	38%
8 weeks including finals	1	3%	6	2%	1	1%	--	--	--	--	8	2%
11 weeks including finals	26	87%	147	49%	70	81%	43	63%	15	88%	301	60%
Total*	30		298		87		68		17		500	

*Does not include students who didn't respond to this item.

TABLE 14

BEST TERM LENGTH REPORTED BY RESPONDENTS

Best Length for a Summer Term	Respondents									
	East (5½ wk)		Metro (8 wk)		West (5½ wk)		West (8 wk)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Term Length Experienced	28	70%	194	64%	58	66%	44	66%	324	65%
Term Length Other Than the One Experienced	12	30%	110	36%	30	34%	23	34%	175	35%
Total	40		304		88		67		499	
Chi-square is not significant.										

TABLE 15

WORST TERM LENGTH REPORTED BY RESPONDENTS

Worst Length for a Summer Term	Respondents									
	East (5½ wk)		Metro (8 wk)		West (5½ wk)		West (8 wk)		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Term Length Experienced	3	10%	6	2%	16	18%	--	--	25	5%
Term Length Other Than the One Experienced	27	90%	292	98%	71	82%	68	100%	458	95%
Total	30		298		87		68		483	
Chi-square is significant at the .001 level.										

FACULTY QUESTIONNAIRE RESULTS

Faculty Opinion About the Best Number of Weeks for a Summer Term to Maximize the Students' Learning Experience in a Particular Subject Area

We asked faculty to opine the best number of weeks for a summer term to maximize the students' learning experience in a particular subject area. Opinions about the best term length are reported by subject area on Table 16. The column headings are the midpoints of response groups; that is, five-and-one-half weeks represent five, five-and-one-half, and six-week responses, eight weeks represent seven, eight and nine-week responses and so on. Comparison of the means indicated that the best number of weeks reported for Social Studies differed significantly from those reported for Other, Sciences, Technologies and Mathematics. The distribution of Western Campus course offerings by five-and-one-half and eight-week sessions* appears to have reflected faculty opinion as reported here. The large majorities of Social Studies, English, Speech and Journalism sections offered were scheduled for the five-and-one-half week module while all science sections and approximately four-fifths each of the technology and math sections offered were scheduled for the eight-week term. Business sections were scheduled for the five-and-one-half and eight-week terms in roughly equal proportions.

TABLE 16

FACULTY OPINION ABOUT THE BEST LENGTH FOR A SUMMER TERM BY SUBJECT AREA GROUPS

Subject Area Group	Total Number of Respondents	Best Length for a Summer Term				
		(5½wks)	(8 wks)	(11 wks)	No Data	Mean No. of Weeks
Social Studies	21	17	4	--	--	5.98
English and Speech	18	9	3	2	4	6.82
Business	16	8	--	3	5	7.00
Other	6	2	4	--	--	7.17
Sciences	15	3	8	1	3	7.63
Technologies	7	2	4	1	--	7.71
Mathematics	10	1	8	--	1	7.72
No Data	3	--	3	--	--	8.00
Total	96	42	34	7	13	6.99

*1972 Summer Class Schedule Booklet for the Western Campus

Faculty Opinion About the Importance of Term Length in Attracting Summer Student Enrollment

Table 17 shows how faculty rated the importance of term length in attracting summer enrollment by the campus and term length taught by respondents. We computed means by assigning a value of zero to *no importance*, one to *some importance*, and two to *very important* responses. The data indicate that almost all faculty respondents believe term length to be of at least some importance in attracting summer enrollment. Comparisons of the means showed only one difference to be significant: Western Campus respondents who taught the five and one-half week session considered term length more important than Metropolitan Campus respondents did. The significant difference is not easily interpreted. We can rule out a simple campus difference. The strongest single influence seems to be term length. The effect of term length is probably enhanced by differences in the distribution of faculty respondents by subject area.

The difference between the Metropolitan and Western five-and-one-half-week groups does seem consonant with the relationship cited previously between the length of term and the importance of length of term as an influence upon the students' decision to enroll as perceived by students.

TABLE 17

FACULTY OPINION ABOUT THE IMPORTANCE OF TERM LENGTH IN ATTRACTING SUMMER ENROLLMENT

Campus and Term Length Taught	Total Number of Faculty Respondents	Importance of Term Length in Attracting Summer Enrollment			
		Very Important	Some Importance	No Importance	Mean
East (5½ wks)	4	3	1	--	1.75
West (5½ wks)	12	10	2	--	1.83
West (8 wks)	11	6	5	--	1.55
West (Both)	7	3.5	3.5	--	1.50
Metro (8 wks)	58	25	32	1	1.41
Total*	92	47.5	43.5	1	1.51

*Does not include faculty who did not respond to this item.

Faculty Opinion About How Summer Students Compare to Regular Term Students

We asked faculty, on the basis of their full-time teaching experience, to compare summer students as a group to regular term students. We listed five variables that we thought influence student grades and asked respondents to indicate whether summer students were the same as, or different from, regular term students on those dimensions. We hoped that the results would help to explain observed differences in GPA between summer and regular term students and between summer students enrolled in the five and one-half week term and those in the eight-week module.

The means shown on Table 18 were calculated by assigning numerical values of plus one, zero, and minus one to the responses. We computed t values to compare each mean to zero and discovered that for the total group of respondents every mean, except the one for *Expressed Concern for Course Grade*, was significant; that is, faculty respondents believe that summer students differ from regular term students in class attendance, quality of performance, completion rate of assigned work, and interest in subject matter. The direction of difference is positive.

The results of a test for the homogenity of variance in the responses to each item indicated that we could add the five scores to calculate a general indicator of difference.* Means of the new scores were computed for each campus and tested for significance. We found that each campus/term-length group of respondents consider summer students to be different from regular-term students on factors that influence student grades. This finding may help to explain why summer grades are generally higher than regular term grades. That is, either the summer session students are actually better students than the regular term students and earn better grades or the faculty just thinks the students are better and awards better grades.

We compared the campus/term-length means to each other and found campus differences to be significant. Table 19 shows that Eastern and Western Campus faculty respondents indicated a greater difference between summer and regular term students than Metropolitan Campus respondents did. Assuming that faculty opinion in this area is positively related to student grades, one would expect the difference between summer and regular term grades to be greater for Eastern and Western Campus students. This was not quite the case. Although Eastern and Western Campus summer grades were significantly higher than spring grades (actual difference of +.31 and +.11 respectively), Metropolitan Campus grades did not differ significantly (actual difference of -.02). According to our hypothesis, Metropolitan summer grades should have been higher than spring with an actual difference lower than that for either Eastern or Western.

The difference between Western eight-weeks and Western five-and-one-half-weeks means was not significant, indicating that faculty respondents consider five-and-one-half-week summer students to be about as different from regular term students as eight-week summer students. Again assuming a positive relationship between faculty opinion and student grades, one would anticipate the differences between summer and regular term grades to be about the same for both five-and-one-half and eight-week students.

*The F Max test value for the five items was 1.95 while 2.04 was needed to reject the null hypothesis at the .05 level.

TABLE 18

FACULTY OPINION ABOUT HOW SUMMER STUDENTS COMPARE TO REGULAR TERM STUDENTS

Campus and Term Length Taught by Faculty Respondents	Opinions About Influences on Student Grades																				Total Mean
	Class Attendance				Quality of Performance				Completion Rate of Assignment Work				Interest in Subject Matter				Expressed Concern for Course Grade				
	Both	Same	Not as Good	$\bar{x}$	Better	Same	Not as Good	$\bar{x}$	Higher	Same	Lower	$\bar{x}$	Greater	Same	Less	$\bar{x}$	Greater	Same	Less	$\bar{x}$	
East (5-1/2 wks)	3	1	--	.75	3	1	--	.75	3	--	1	.50	3	--	1	.50	2	2	--	.50	.60
Metro (8 wks)	20	34	6	.23	23	27	9	.24	19	34	6	.22	20	35	4	.27	10	46	3	.12	.22
West (5-1/2 wks)	7	5	--	.58	10	2	--	.83	6	5	1	.42	5	7	--	.42	3	9	--	.25	.50
West (8 wks)	7	4	--	.64	5	5	1	.36	6	5	--	.55	4	7	--	.36	3	8	--	.27	.44
West (Both)	3	4	--	.43	4	3	--	.57	3	4	--	.43	3	4	--	.43	2	4	1	.14	.40
Total	40	48	6	.36	45	38	10	.38	37	48	8	.31	35	53	5	.32	20	69	4	.17	.31

The data are significant at the .05 level.

However, this was not the case. Western eight-week summer grades were significantly higher than Western spring grades (actual difference of +.33), while Western five-and-one-half-week grades were significantly lower than spring (actual difference of -.47) .

TABLE 19

SIGNIFICANCE OF MEAN FACULTY OPINION ABOUT HOW SUMMER STUDENTS COMPARE TO REGULAR TERM STUDENTS

Faculty Respondents: Campus by Term Length	Faculty Respondents: Campus by Term Length			
	East 5½ wks. ($\bar{x}$=.60)	Metro 8 wks. ($\bar{x}$=.22)	West 5½ wks. ($\bar{x}$=.50)	West 8 wks. ($\bar{x}$=.44)
Eastern 5-1/2 weeks ($\bar{x}$=.60)	X	Significant	Not Significant	Not Significant
Metro 8 weeks ($\bar{x}$=.22)	Significant	X	Significant	Significant
West 5-1/2 weeks ($\bar{x}$=.50)	Not Significant	Significant	X	Not Significant
West 8 weeks ($\bar{x}$=.44)	Not Significant	Significant	Not Significant	X

STUDENT GRADES

We began an analysis of student grades by again testing two hypotheses that were formulated in the study of the 1971 summer session: first, summer grades do not differ from those for a regular academic term; second, grades for the eight-week summer module do not differ from those for the five-and-one-half-week module. The results indicated that we must again reject both hypotheses. After briefly reviewing these relationships, we will introduce some additional data to support explanations that were offered in our last report.

Summer Grades Compared to Those for a Regular Academic Term

Table 20 shows all course grades earned for four terms. Comparison of the means indicated that summer grades were higher than those for any term of the regular academic year. One explanation is that summer students may be different from regular term students. Faculty opinion has already suggested that summer students are different on four of the five factors that we selected as influences on grades. Such data is subjective of course, but our rationale in presenting it as support for the explanation is that the opinion of full-time faculty is pertinent inasmuch as they award student grades and those grades may be influenced by their opinion.

TABLE 20

MEAN COURSE GRADES FOR FOUR TERMS

	Fall 1971	Winter 1972	Spring 1972	Summer 1972
Number of Course Grades	36,967	36,277	32,883	7,497
Mean	2.62	2.65	2.69	2.73
Standard Deviation	1.026	1.021	1.212	1.043

We know of least one way in which summer students are different from regular term students: the summer proportion of females is higher than the proportions for the previous academic terms (Table 21). Since sex is related to academic performance, the summer influx of females may account for some of the difference between summer and regular term grades.

We also noted that while the proportion of female students has increased over the last two years, so has the GPA increased. Not all of the increase in GPA is accounted for by the change in proportion of females since the GPA increased in some quarters where the proportion of females did not increase.

TABLE 21

PERCENT OF FEMALES ENROLLED
BY TERM 1968 TO 1972

Year	Percent of Females by Term			
	Fall	Winter	Spring	Summer
1968-69	38%	36%	37%	45%
1969-70	39%	39%	41%	49%
1970-71	43%	41%	43%	51%
1971-72	43%	43%	44%	53%

By way of offering another explanation for the difference between summer and regular term grades, we hypothesized that grades differ by course level, such that grades for 200 level courses are significantly higher than those for 100 level courses; and that a relatively larger proportion of 200 level courses scheduled for summer would increase the summer grade mean. To test the hypothesis we tallied and compared 1972 course grades by course level. We selected the Winter term for analysis to obtain a roughly proportional balance of 090, 100, and 200 level courses. Test results indicated no relationship between course grades and course level, so we rejected the idea that any change in distribution of summer courses by level would influence summer grades.

We offer as a final explanation for the difference between summer and regular term grades the possibility that subject area is related to grades. We know that the 1972 summer distribtuion of course offerings by subject area differed from the distributions for the fall, winter and spring terms. The chi-square calculated with the data in Appendix VI was 43.801 which is significant at the .001 level. This difference in subject area enrollments could be an explanatory influence upon summer grade-point average (GPA) only if there is a stable relationship between subject areas and GPA and then a higher percentage of the higher GPA subject areas in the summer. We looked at the GPA by subject area groupings for both Spring 1972 and Summer 1972. We were perplexed by the results. Let us present the results and you, the reader, help us determine what they mean.

First, the results presented in Table 22 indicate that there were differences between subject areas as follows:

(1) Social Sciences, Math and Business were a group
(2) Business and Sciences were a group
(3) English, Speech, and Journalism was alone
(4) Technical was alone
(5) Other* was alone.

*For the definitions of the subject area groups see Appendix VII.

Put another way, the groups look like this:

Social Sciences	Math Business Sciences	English Speech Journalism	Technical	Other

Second, the same analyses for Summer 1972, presented in Table 23 indicate differences between subject areas as follows:

Business	Social Sciences	English Speech Journalism	Science	Math	Technical	Other

It is immediately apparent that the relationships among the means changed from spring to summer. We checked to see whether there was still an overall relationship between the two terms. The correlation we calculated was .78, which is a significant correlation at the .05 level. Our conclusion was that the differences between the subject areas are probably real and probably fairly stable. But there was enough of a change to raise a question about how the subject areas should be ranked.

So far we said that subject area and GPA were related, and that the relationship had some stability over two terms. But one question still remained: did the differences in enrollment by subject area differ between the high GPA subject areas and the low GPA subject areas? We approached the answer to this question by grouping the subject area groups from the results in Tables 22 and 23. There we found that the only stable distinction was that the Technical and Other groups were higher than the remainder of the subject area groups. When we compared the enrollments with this classification we found that the two terms both enrolled 26 percent of the FTE students in the higher GPA areas. Our conclusion: scratch enrollments by subject area as a possible explanation of the differences in GPA between the spring and summer sessions.

Before we leave the subject, let us mention one other item of interest. Granted that there is a relationship between GPA and Subject Area Groups, what is the strength of the relationship? Our approach to the answer was to calculate the Contingency Coefficient for the frequences tallied by letter grade (A, B, etc.) and Subject Area Group. For 32,405 grades awarded for the Spring 1972 term the Contingency Coefficient was .214. For Summer 1972, it was .268 based upon 7,497 grades. (See Appendix VIII.) Estimating that the maximum Contingency Coefficient for a 7 by 5 table would be .91, we estimated that the correlation coefficient for the letter grade/subject area group data would be about .24 for Spring 1972 and .29 for Summer 1972. This correlation indicates that the efficiency of our predictions of student grades would be improved an average of less than five percent by knowing the subject area group in which each student was awarded his grade.

TABLE 22

DIFFERENCES BETWEEN GRADE-POINT AVERAGE BY SUBJECT AREA GROUPS, SPRING 1972, INDICATED BY THE NEWMAN-KEULS METHOD

Subject Area	Means	Subject Area Initials						
		SS	M	B	S	ESJ	T	O
Social Sciences	2.516	-			**	**	**	**
Math	2.528		-		**	**	**	**
Business	2.565			-		**	**	**
Sciences	2.600				-	**	**	**
ESJ*	2.686					-	**	**
Technical	2.842						-	**
Other	3.119							-

*ESJ refers to English, Speech, and Journalism.

**Differences between these means are significant at .01 level.

TABLE 23

DIFFERENCES BETWEEN GRADE-POINT AVERAGE BY SUBJECT AREA GROUPS, SUMMER 1972, INDICATED BY THE NEWMAN-KEULS METHOD

Subject Area	Means	Subject Area Initials						
		B	SS	ESJ	S	M	T	O
Business	2.467	-		**	**	**	**	**
Social Sciences	2.571		-	--	**	**	**	**
ESJ*	2.700			-		**	**	**
Science	2.712				-	**	**	**
Math	2.922					-	**	**
Technical	3.075						-	
Other	3.154							-

*ESJ refers to English, Speech, and Journalism.

**Differences between these means are significant at the .01 level.

Eight-Week Compared to Five-and-One-Half Week Summer Module Grades

We tallied summer grades by campus and term length to test the hypothesis that grades for eight-week module courses do not differ from those for five and one-half week courses. Analysis of the data on Table 24 indicates that we must reject the hypothesis. The results of *t* tests showed a significant difference between Western 8 and Western 5½ means. Other differences between means by term length appear to be related to campus influences.

The difference between Western 8 and Western 5½ is related to the differences we've observed in the distributions of enrollment by subject area groupings for eight and five-and-one-half weeks. By classifying the enrollments according to the two term lengths and the high and low GPA subject groups area, (Table 25), we calculated a Chi-square of 30 which says there is a strong relationship on the Western campus between the length of term (5½ or 8) and the proportion of FTE enrollments in high GPA subject area groupings versus low GPA subject area groupings. As a consequence, the disproportionate enrollments by subject area is a likely explanation for the difference in GPA between the five-and-one-half and eight-week terms on the Western campus.

Another implication seems of some importance. When the Committee on the Calendar of Instruction recommended two term lengths, they also recommended that the term length for which a course was to be scheduled be carefully selected for that course considering the nature of the learning task (e.g., developing a skill, memorizing, developing an attitude, etc.) and the conditions under which the material was to be learned (e.g., day or evening classes, lecture or laboratory setting). One reason that there were differences in the proportions of student FTE enrollments by subject area between the two term lengths could be that the officials responsible for scheduling course offerings considered the nature of the course in selecting the term length.

In line with this implication there are some shifts in GPA that seem to suggest that the GPA for the five-and-one-half week term, other things being equal, is lower than the GPA for a longer term. For example, the GPA for Business and for English, Speech, and Journalism went down in the rankings of the subject area groupings by GPA from spring to summer. Could this be due in part to the fact that these subject area groupings were predominantly offered in the five-and-one-half week format? Contradicting this explanation is the rise in the rankings for the Social Sciences and Other groupings from the spring to summer ranks. If this proves to be worth exploring, we could design an investigation.

TABLE 24

SIGNIFICANCE OF COMPARISONS BETWEEN SUMMER GRADE MEANS FOR CAMPUS AND TERM LENGTH

Grade Mean by Campus and Term Length	Grade Mean by Campus and Term Length			
	Eastern 5½ (3.13)	Western 8 (3.01)	Metro 8 (2.67)	Western 5½ (2.61)
Eastern 5½ (3.13)	X	Significant	Significant	Significant
Western 8 (3.01)	Significant	X	Significant	Significant
Metro 8 (2.67)	Significant	Significant	X	Not Significant
Western 5½ (2.61)	Significant	Significant	Not Significant	X

TABLE 25

WESTERN CAMPUS SUMMER FTE ENROLLMENT BY MODULE

Subject Area Group	Western Campus Summer FTE Enrollment by Module				Total
	5½ week		8 week		
	No.	Row %	No.	Row %	
Social Studies	144	73%	54	27%	198
Math	2	7%	28	93%	30
English & Speech	68	91%	7	9%	75
Sciences	7	19%	30	81%	37
Business	34	57%	26	43%	60
Technologies	27	26%	75	74%	102
Other	24	65%	13	35%	37
Total	306	57%	233	43%	539

Another possible explanation for the differences between the Western eight and five and one-half-week GPA is that the proportion of eight-week course withdrawals, compared to five and one-half-week withdrawals, is higher. Chi-square analysis of the data on Table 26 indicated significance at the .001 level, supporting the idea that the proportion of eight-week withdrawals is higher. The higher rate could have had the effect of augmenting the eight-week grade mean, assuming that students who withdraw from courses generally do so in anticipation of low grades.

TABLE 26

WITHDRAWAL RATE BY TERM LENGTH

Western Campus Summer Module	1972 Summer Course Grades				
	Withdrawals		Other Grades		
	No.	Row %	No.	Row %	Total
5½ week	134	10%	1,163	90%	1,297
8 week	149	14%	918	86%	1,067
Total	283	12%	2,081	88%	2,364

SUMMARY

We selected three student variables as criteria of how well Cuyahoga Community College is serving its summer students and attempted to relate each criterion to summer term length.

(1) The College experienced overall summer enrollment growth from 1967 to 1972 in terms of student headcount enrollments, but we could not determine whether changes in term length were related to the pattern of this growth. However, term length did appear to influence FTE enrollment at the Western Campus. A comparison of 1971 and 1972 FTE enrollment by campus and term length suggested that the shorter term was more popular than the longer term with Western Campus summer students. Term length influenced mean number of credit hours carried per student at the Western Campus. The mean number of hours decreased over a period of four summer sessions during which the enrollment in the shorter term increased.

(2) As in our 1971 survey, *acceleration* or the idea of completing a program of studies sooner was most frequently cited as the reason for enrolling in the summer session. A student's reason for enrolling in the summer session was not related to the length of the session the student attended. Students who enrolled in the five-and-one-half-week term (as compared to the eight-week term) reported that term length was a more important consideration in making the decision to enroll or not.* Students reported that they would have carried the same credit hour load had the length of term been different. This fact suggests that the number of hours summer students carried was not related to their enrollment in a particular term length. However, the number of hours carried is related to enrollment in a particular term length on the basis of other evidence cited.

(3) Most students reported satisfaction with the length of the summer term in which they were enrolled. However, a greater proportion of the students indicating dissatisfaction were enrolled in the five-and-one-half-week term.

We surveyed summer faculty asking for their opinions. Social Studies faculty respondents favored a shorter summer term (mean of 5.98 weeks) for maximizing the students' learning experience in their subject area. This preference differed significantly from the preferences of faculty respondents in Science Technologies, Mathematics, and other disciplines who favored longer terms. Faculty opinion appeared to reflect the distribution of Western Campus course offerings.

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*The distinction between *reason* and *important consideration* is the difference between a sufficient ground of explanation and a facilitating (or even necessary) but not sufficient ground of explanation. A *reason* is a sufficient ground of explanation for doing something (e.g., enrolling in a summer session). Term length (having a five-and-one-half-week session available) is not a sufficient condition for getting a student to enroll, but it may be an influence which effects his enrollment, even as a necessary (but not sufficient) condition.

Nearly all faculty respondents considered term length to be of at least some importance in attracting summer student enrollment.

In comparing summer to regular term students faculty respondents opined that summer students at each campus were *better* than regular term students on four of five variables thought to influence grades. Since summer grades generally tend to be higher than regular term grades, the results suggest that either summer students are actually better and earn higher grades or that faculty just think they are better and award higher grades.

Comparison of 1972 summer Grade Point Average (GPA) to the GPA's for each quarter of the preceding 1971-72 academic year indicated that summer grades were significantly higher. We tested three explanations, in addition to faculty opinion, to account for the difference: (1) a larger summer proportion of females, based on the idea that sex is related to academic performance; (2) a larger proportion of 200 level courses scheduled for summer, based on the hypothesis that course level is positively related to grades; and (3) a difference in the distribution of subject areas scheduled for summer, grounded on the hypothesis that subject area is related to grades. We concluded from analyses of data that the first explanation accounted for some of the difference between summer and regular term GPA's. The second explanation did not account for any of the difference, inasmuch as grades proved to be unrelated to course level. The third explanation was rejected. Our analysis did indicate a relationship between subject area and grades but indicated no change from one term to another in proportion of enrollment by subject area.

We found significant differences between eight-week and five-and-one-half-week GPA's. Differences between GPA's appeared to be related to campus influences. To account for the difference between Western eight-week (mean of 3.01) and Western five-and-one-half-week (mean of 2.61) GPA's, we offered two empirically supported explanations: (1) a larger proportion of FTE student enrollment in the eight-week session (compared to the five-and-one-half-week session) was in the subject areas which generated GPA's higher than those for other subject areas; (2) a greater proportion of students withdrew from the eight-week session compared to the five-and-one-half-week session. (We assume that students usually withdraw from courses in anticipation of low grades.)

CONCLUSION

In view of our experience with the summer sessions of 1971 and 1972, the conclusions at this point are about what we can expect from setting the same calendar for next summer. Can we anticipate in 1973, for example, another increase in Western FTE enrollment in the five-and-one-half-week term? Probably yes, but not as substantial an increase as that experienced in 1972. Of course this conclusion depends upon a variety of relationships. The *drawing power* of the five-and-one-half-week term is inextricably dependent upon the way courses are scheduled. If the subject areas scheduled remain in the same pattern of term length, time of day, and number of required contact hours per week, then we would expect the proportions of five-and-one-half and eight-week enrollment to remain constant except for any change in the relative drawing power of the two term lengths. The *drawing power* we are thinking of is in the form of information possessed by students. They would know that they have a choice, and they would feel that the relative advantages of the five-and-one-half and eight-week term would favor the shorter term. Students get information on the choices from the schedule book, but their feelings that one term has an advantage over another are shaped by their personal experiences and by talking with other students and with instructors. By next summer students will have had an opportunity to learn about the relative advantages of the two term lengths and we expect that a slightly larger proportion of students will elect the shorter term. This expectation is in recognition of the slightly larger proportion of students in the five-and-one-half-week term who find the term length unsatisfactory. Although this slightly unsatisfactory influence exists, the predominating influence, we feel, is the inclination of the students to finish a course as quickly as possible. Although the early finish is also related to a lower grade, students probably don't know that, so it is not an influence upon their decision.

Can we expect five-and-one-half-week course grades to be lower than eight-week grades? Yes. The experience of two summers has demonstrated that five-and-one-half-week course grades are lower. Subject area differences in grades, disproportionate enrollments by subject area, and withdrawal rate differences between five-and-one-half and eight-week modules have resulted, and will probably again result, in a lower five-and-one-half week Grade Point Average (GPA).

Will students be satisfied with the length(s) of term(s) offered? This satisfaction will influence their decision to attend as well as their response to a question after the close of the summer session. Thus the question has three aspects concerning whether:

- the term length(s) offered will appeal to prospective summer students
- a single summer term has the same appeal to prospective summer students as a combination of terms
- students who do enroll in the summer session are satisfied with the term length(s) they experience.

We do not now have the answers to the questions relating to the appeal of a particular term length or combination of terms to prospective summer students.

However, we hope to obtain the answers to such question by polling spring students. We expect that, in general, students who enroll in next year's summer session will be satisfied with the term length they experience. A greater proportion of those who enroll in the five-and-one-half-week module, however, will be dissatisfied with that length of term by the end of the term.

The above conclusions concern some of the probable effects of setting the same calendar for next summer. What are some implications of these effects? By offering students a five-and-one-half-week option we are providing them with a situational structure in which they are on the average likely to do less well academically. Recall at this point that Western five-and-one-half-week course grades were significantly lower than Western spring grades, while eight-week grades were higher. Also remember that faculty rated summer students higher than regular-term students on factors which influence grades. We believe that students choose the five-and-one-week term in part because of the scheduling of course offerings, but also because of a wish to earn the credits in the shortest possible time. We suspect that students persist in the five-and-one-half week high pressure study situation with a willingness to accept a slightly lower grade in order to *get it over with* as quickly as possible. Of course, this *suspicion* is only hypothesis at this point and will have to be tested later on; but it may help to explain the lower withdrawal rate and lower GPA for the five-and-one-half-week term.

The five-and-one-half-week option presents an opportunity for students to do less well academically and results in a greater frequency of dissatisfaction among students. On the other hand the five-and-one-half-week term appears to be more popular with those students who were offered a choice between five-and-one-half and eight-week modules, as evidenced in part by an increase in five-and-one-half-week FTE enrollment. Which consequences of the five-and-one-half-week option are deemed most or least desirable must be weighed in terms of the College's purpose for offering a summer session. That purpose, of course, is to serve students.

The Cuyahoga Community College catalogue states that the College *has committed itself to extend broad educational opportunities to the youth and adults of its community.* The catalogue further states that the College *has established the corollary requirement of high performance from all those who participate in its programs.* The summer session represents an extension of educational opportunities to a period not covered by the regular academic year. Term length reflects one of the ways by which such opportunities are extended. If the five-and-one-half-week module inhibits actualization of student potential, its relative merits should be carefully weighed.

APPENDICES

APPENDIX I

DESCRIPTION OF EASTERN CAMPUS RESPONDENTS
NONRESPONDENTS AND ALL SUMMER STUDENTS

Eastern Campus Summer Students by Sex

	Respondents	Nonrespondents	Total Sample	All Ss
Male	15	22	37	174
Female	26	23	49	254
Total	41	45	86	428

Chi-square is not significant.

Eastern Campus Summer Students by Status

	Respondents	Nonrespondents	Total Sample	All Ss
New	23	20	43	184
Continuing	17	21	38	180
Returning	1	4	5	64
Total	41	45	86	428

Chi-square is not significant.

Eastern Campus Summer Students by Transfer

	Respondents	Nonrespondents	Total Sample	All Ss
Transfer	12	24	36	164
Non-Transfer	29	21	50	264
Total	41	45	86	428

Chi-square is significant at the .05 level.

Eastern Campus Summer Students by Hours Carried

	Respondents	Nonrespondents	Total Sample	All Ss
1-5 hrs.	32	35	67	306
6-11 hrs.	9	10	19	117
12 or more hrs.	0	0	0	5
Total	41	45	86	428

Chi-square is not significant.

APPENDIX II

DESCRIPTION OF METROPOLITAN CAMPUS RESPONDENTS, NONRESPONDENTS, AND ALL SUMMER STUDENTS

Metropolitan Campus Summer Students by Sex

	Respondents	Nonrespondents	Total Sample	All Ss
Male	133	209	342	1,759
Female	174	284	458	2,208
Total	307	493	800	3,967

Chi-square is not significant.

Metropolitan Campus Summer Students by Status

	Respondents	Nonrespondents	Total Sample	All Ss
New	66	114	180	874
Continuing	188	275	463	2,406
Returning	53	104	157	687
Total	307	493	800	3,967

Chi-square is not significant.

Metropolitan Campus Summer Students by Transfer

	Respondents	Nonrespondents	Total Sample	All Ss
Transfer	90	114	204	1,000
Non-Transfer	217	379	596	2,967
Total	307	493	800	3,967

Chi-square is not significant.

Metropolitan Campus Summer Students by Hours Carried

	Respondents	Nonrespondents	Total Sample	All Ss
1-5 hrs.	166	242	408	1,888
6-11 hrs.	132	219	351	1,850
12 or more hrs.	9	32	41	229
Total	307	493	800	3,967

Chi-square is not significant.

APPENDIX III

DESCRIPTION OF WESTERN CAMPUS RESPONDENTS, NONRESPONDENTS, AND ALL SUMMER STUDENTS

Western Campus Summer Students by Sex

	Respondents	Nonrespondents	Total Sample	All Ss
Male	93	94	187	906
Female	83	74	157	839
Total	176	168	344	1,745

Chi-square is not significant.

Western Campus Summer Students by Status

	Respondents	Nonrespondents	Total Sample	All Ss
New	40	39	79	437
Continuing	118	111	229	1,073
Returning	18	18	36	235
Total	176	168	344	1,745

Chi-square is not significant.

Western Campus Summer Students by Transfer

	Respondents	Nonrespondents	Total Sample	All Ss
Transfer	69	72	141	638
Non-Transfer	107	96	203	1,107
Total	176	168	344	1,745

Chi-square is not significant.

Western Campus Summer Students by Hours Carried

	Respondents	Nonrespondents	Total Sample	All Ss
1-5 hrs.	125	116	241	1,182
6-11 hrs.	49	49	98	521
12 or more hrs.	2	3	5	42
Total	176	168	344	1,745

Chi-square is not significant.

APPENDIX IV

NUMBER AND PERCENTAGE OF COURSE SECTIONS CANCELLED
DURING THE 1970, 1971 AND 1972 SUMMER SESSIONS

Campus and Term Length	Sections Offered			Cancelled Sections						Credit Sections Cancelled	Non-Credit Sections Cancelled	Number of Students in Cancelled Sections
				DAY		EVE.		TOTAL				
	Day	Eve	Total	No.	% of Day	No.	% of Eve.	No.	% of Total Offered			
Metropolitan												
1970	274	125	399	78	28%	25	20%	103	26%	82	21	333
1971	217	115	332	31	14%	22	19%	53	16%	42	11	95
1972	222	93	315	20	9%	8	9%	28	9%	28	5	94
Western												
1970	74	70	144	27	36%	17	24%	44	31%	36	8	264
1971	77	65	142	34	44%	15	23%	49	35%	45	4	379
5 wk.	62	--	62	25	40%	--	--	25	51%	--	--	--
8 wk.	15	65	80	9	60%	15	23%	24	49%	--	--	--
1972	67	65	132	22	33%	16	25%	38	29%	38	4	318
5-1/2 wk.	47	27	74	16	34%	7	26%	23	31%	--	--	--
8 wk.	20	38	58	6	30%	9	24%	15	26%	--	--	--
Eastern												
1972	30	33	63	15	50%	8	24%	23	35%	23	2	116
District TOTAL												
1970	348	195	543	105	30%	42	22%	147	27%	118	29	597
1971	294	180	474	65	22%	37	21%	102	22%	97	15	474
1972	319	191	510	57	18%	32	17%	89	17%	89	11	528

APPENDIX V

QUESTIONNAIRES

Faculty Questionnaire

Student Questionnaires

- Eastern Campus
- Metropolitan Campus
- Western Campus

CUYAHOGA COMMUNITY COLLEGE

Inter-Office Memorandum

TO:

DATE: July 17, 1972

FROM: Barbara Brown, Research Assistant, Institutional Research and Planning

SUBJECT: 1972 Summer Session

We wish to know what you think about the best length for a summer term, the importance of term length in attracting summer enrollment, and the kind of students who attend the summer session.

We'd like to report your opinions to the Calendar of Instruction Committee and would appreciate your response as soon as possible. Please return the completed questionnaire to the Office of Institutional Research and Planning, (Room 117) Brownell Building.

1972 SUMMER EVALUATION FACULTY QUESTIONNAIRE

1. To maximize students' learning experience in _____ (Name of Subject area)
   I think that _____ (specify number of weeks) weeks including finals is the best length for a summer term.

2. How important is the length of the Summer Session in regard to attracting student enrollment.

   ☐ Very important
   ☐ Of some importance
   ☐ No importance

3. From your experience how do summer students as a group compare to regular term students in:

a. Class attendance	☐ Better	☐ Same	☐ Not as good
b. Quality of performance	☐ Better	☐ Same	☐ Not as good
c. Completion rate of assigned work	☐ Higher	☐ Same	☐ Lower
d. Interest in subject matter	☐ Greater	☐ Same	☐ Less
e. Expressed concern for course grade	☐ Greater	☐ Same	☐ Less

4. Have you any additional comments on the length of a summer term in general or the 1972 Summer Session in particular?

_____

_____

(EASTERN CAMPUS)

July 24, 1972

Dear Student:

We are interested in knowing your opinions about the 1972 Summer Session at Cuyahoga Community College. Your responses to the questions below will help us to examine how Tri-C can best serve its summer students.

Please answer the following questions. Then refold this questionnaire so that our address is on the outside, staple or tape it, and mail the questionnaire back to us. Thank you.

QUESTIONNAIRE

1. Why did you enroll in the current summer session at CCC? (Please check only one as your most important reason.)

   ☐ To earn credit(s) for transfer to another institution.

   ☐ To pick up credits so that I can finish my program or earn my degree at CCC sooner.

   ☐ To repeat a course or courses.

   ☐ I am in a special program.

   ☐ A particular course (or courses) appealed to me.

   ☐ To lighten my course load for the 1972 Fall term.

   ☐ Needed a course or courses that were not offered at a time convenient for me during the regular academic year.

   ☐ I actually wanted to work instead of attending summer school but I couldn't find a job.

   ☐ Other (please specify)_____

2. How important was the length of the summer term as a consideration in your decision to enroll?

   ☐ A very important consideration.

   ☐ A consideration of some importance.

   ☐ Not a consideration at all.

3. Do you know anyone who did not enroll for the CCC summer session because of the length of the term?

   ☐ Yes ☐ No

4. If the summer term had been longer than $5\frac{1}{2}$ weeks, would you have registered for:

   ☐ More hours than you're taking now.

   ☐ Fewer hours than you're taking now.

   ☐ The same number of hours you're taking now.

5. In your opinion the best length for a summer term is:

   ☐ $5\frac{1}{2}$ weeks (including finals)

   ☐ 8 weeks (including finals)

   ☐ 11 weeks (including finals)

6. In your opinion the worst length for a summer term is:

   ☐ $5\frac{1}{2}$ weeks (including finals)

   ☐ 8 weeks (including finals)

   ☐ 11 weeks (including finals)

(METROPOLITAN CAMPUS)

July 25, 1972

Dear Student:

We are interested in knowing your opinions about the 1972 Summer Session at Cuyahoga Community College. Your responses to the questions below will help us to examine how Tri-C can best serve its summer students.

Please answer the following questions. Then refold this questionnaire so that our address is on the outside, staple or tape it, and mail the questionnaire back to us. Thank you.

QUESTIONNAIRE

1. Why did you enroll in the current summer session at CCC? (Please check only one as your most important reason.)

   ☐ To earn credit(s) for transfer to another institution.
   ☐ To pick up credits so that I can finish my program or earn my degree at CCC sooner.
   ☐ To repeat a course or courses.
   ☐ I am in a special program.
   ☐ A particular course (or courses) appealed to me.
   ☐ To lighten my course load for the 1972 Fall term.
   ☐ Needed a course or courses that were not offered at a time convenient for me during the regular academic year.
   ☐ I actually wanted to work instead of attending summer school but I couldn't find a job.
   ☐ Other (please specify)_____

2. How important was the length of the summer term as a consideration in your decision to enroll?

   ☐ A very important consideration.
   ☐ A consideration of some importance.
   ☐ Not a consideration at all.

3. Do you know anyone who did not enroll for the CCC summer session because of the length of the term?

   ☐ Yes ☐ No

4. If the summer term had been shorter than eight weeks, would you have registered for:

   ☐ More hours than you're taking now.
   ☐ Fewer hours than you're taking now.
   ☐ The same number of hours you're taking now.

5. If the summer term had been longer than eight weeks, would you have registered for:

   ☐ More hours than you're taking now.
   ☐ Fewer hours than you're taking now.
   ☐ The same number of hours you're taking now.

6. In your opinion the best length for a summer term is:

   ☐ 5½ weeks (including finals)
   ☐ 8 weeks (including finals)
   ☐ 11 weeks (including finals)

7. In your opinion the worst length for a summer term is:

   ☐ 5½ weeks (including finals)
   ☐ 8 weeks (including finals)
   ☐ 11 weeks (including finals)

(WESTERN CAMPUS)

July 26, 1972

Dear Student:

We are interested in knowing your opinions about the 1972 Summer Session at Cuyahoga Community College. Your responses to the questions below will help us to examine how Tri-C can best serve its summer students.

Please answer the following questions. Then refold this questionnaire so that our address is on the outside, staple or tape it, and mail the questionnaire back to us. Thank you.

QUESTIONNAIRE

1. Why did you enroll in the current summer session at CCC? (Please check only one as your most important reason.)

   - ☐ To earn credit(s) for transfer to another institution.
   - ☐ To pick up credits so that I can finish my program or earn my degree at CCC sooner.
   - ☐ To repeat a course or courses.
   - ☐ I am in a special program.
   - ☐ A particular course (or courses) appealed to me.
   - ☐ To lighten my course load for the 1972 Fall term.
   - ☐ Needed a course or courses that were not offered at a time convenient for me during the regular academic year.
   - ☐ I actually wanted to work instead of attending summer school but I couldn't find a job.
   - ☐ Other (please specify)_____

2. This summer you are enrolled in:

   - ☐ The 5½ week module.
   - ☐ The 8 week module.
   - ☐ Both the 5½ and 8 week modules.

3. How important was the length of the summer term as a consideration in your decision to enroll?

   - ☐ A very important consideration.
   - ☐ A consideration of some importance.
   - ☐ Not a consideration at all.

4. Do you know anyone who did not enroll for the CCC summer session because of the length of the term?

   ☐ Yes ☐ No

5. If the summer term had been longer than eight weeks, would you have registered for:

   - ☐ More hours than you're taking now.
   - ☐ Fewer hours than you're taking now.
   - ☐ The same number of hours you're taking now.

6. In your opinion the best length for a summer term is:

   - ☐ 5½ weeks (including finals)
   - ☐ 8 weeks (including finals)
   - ☐ 11 weeks (including finals)

7. In your opinion the worst length for a summer term is:

   - ☐ 5½ weeks (including finals)
   - ☐ 8 weeks (including finals)
   - ☐ 11 weeks (including finals)

APPENDIX VI

STUDENT FTE BY SUBJECT AREA GROUPING AND TERM
ON THE WESTERN CAMPUS 1971-72

Subject Area	Western Campus FTE by Term											
	Fall 1971		Winter 1972		Spring 1972		Summer 1972					
							Total		5½ wk.		8 wk.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Social Studies	1045	29%	1009	30%	934	31%	198	37%	144	47%	54	23%
English, Speech & Journalism	571	16%	500	15%	422	14%	75	14%	68	22%	7	3%
Sciences	294	8%	269	8%	203	7%	37	7%	7	2%	30	13%
Business	565	16%	507	15%	462	15%	60	11%	34	11%	26	11%
Other	312	9%	313	9%	322	11%	37	7%	24	8%	13	6%
Math	248	7%	233	7%	187	6%	30	6%	2	1%	28	12%
Technologies	564	16%	575	17%	493	16%	102	19%	27	9%	75	32%

Chi-square is 43.801 and significant at the .001 level.

APPENDIX VII

CLASSIFICATION OF SUBJECT AREAS BY GROUPS

Social Studies	Mathematics	English Speech, & Journalism	Sciences	Business	Technologies	Other
Anthropology Geography History Philosophy Political Science Social Science Sociology			Biology Chemistry Earth Science Physical Science Physics	Accounting Banking & Finance Business Administration Economics Office Administration	Architecture and Construction Aviation Child Care Court and Conference Reporting Data Processing Dental Hygiene Dietary Early Childhood Education Educational Media Electrical-Electronic Engineering Graphic Communications Health Technology Industrial Supervision Inhalation Therapy Law Enforcement Mechanical Engineering Medical Assisting Medical Records Mental Health Nursing Occupational-Therapy Assisting Physician's Clinical Assisting Real Estate Surgical Assisting Transportation Urban Planning	Art Dance Foreign Languages Health Music Physical Education Theatre Arts

APPENDIX VIII

NUMBERS OF DISTRICT GRADES BY TERM AND SUBJECT AREA GROUPINGS

SPRING 1972

Subject Area	A	B	C	D	F	Total
Social Studies	1,595	2,852	3,042	929	307	8,725
English and Speech	1,015	1,685	1,591	302	97	4,690
Math	418	411	524	160	114	1,627
Sciences	380	669	760	147	42	1,998
Business	1,091	1,488	1,545	457	243	4,824
Technologies	1,935	2,435	1,860	382	126	6,738
Other	1,557	1,385	687	106	68	3,803
Total	7,991	10,925	10,009	2,483	997	32,405

X^2 =1562.251, df=24
C =.2144594
Estimated* r=.24

SUMMER 1972

Subject Area	A	B	C	D	F	Total
Social Studies	444	705	769	171	89	2,178
English and Speech	286	454	435	64	35	1,274
Math	146	167	127	17	7	464
Sciences	145	223	246	22	14	650
Business	315	338	338	131	127	1,249
Technologies	343	389	173	24	17	946
Other	309	271	129	14	13	736
Total	1,988	2,547	2,217	443	302	7,497

X^2 =579.056, df=24
C =.2677692
Estimated* r=.29

*Maximum C for a 7 x 5 table was estimated to be the average of the maximum C for a 5 x 5 table (.894) and a 7 x 7 table (.926), thus .91.